Electric Chain Hoist

Operation Manual
&
Parts List

Series:

☐ YLTU(D)-100
☐ YLTU(D)-200
☐ YHTU(D)-100
☐ YHTU(D)-200

CHENG DAY MACHINERY WORKS CO., LTD.

SAFETY-IMPORTANT

The use of any hoist and trolley presents some risk of personal injury or property damage.

That risk is greatly increased if proper instructions and warnings are not followed. Before using this hoist, each user should become thoroughly familiar With all warnings, instructions and recommendations herein.

THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS.
READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL AND ANY PROVIDED WITH THE EQUIPMENT BEFORE ATTEMPTING TO OPERATE YOUR ELECTRIC CHAIN HOIST.

CONTENTS

1.FOREWORD

This manual contains important information to help you properly install, operate and maintain the Black Bear electric chain hoist for maximum performance, economy and safety.

Please study its contents thoroughly before putting the electric Chain hoist into operation. By practicing correct operation, procedures and by carrying out the preventative maintenance recommendations, you will be assured of dependable service.

In order to help us to supply correct spare parts quickly, please always specify,

(1) Hoist model

(2) Serial number

(3)Part number, plus the description.

We will have your trust of Cheng Day's long term satisfactory service as our belief.

Should you have any queries, please contact:

(Please ask for a company's stamp from your local agent)

2.MAIN SPECIFICATIONS

2.1 Specifications

The following specifications are common to all electric chain hoists.

Table 2-1 Specifications

Item		Detail	
Working temperature range (˚C)		-5 to +40	
Working humidity range (%)		85 or less	
Protection	Hoist	IP 42	
	Push button	IP 65	
Electric power supply		Three Phase, 220V~ 600V, 50Hz,60Hz	
Noise Level (dB)	Single speed hoist	81	
	Dual speed hoist	81	
Chain Size	Wll (working load limit) (t)	Nominal diameter (mm)	Pitch (mm)
	1T, 2T	7.1	20.2

Remarks: (1) Contact an authorized dealer for information on using the hoist outside the working temperature or humidity range.

(2) Intended use : This hoist has been designed for vertically lifting and lowering load under normal atmospheric conditions of work place.

(3) Noise levels were measured at a distance of 1m horizontally from the hoists during normal operation.

2.2 Mechanical Classification (Grade) and Life

Safety and life for electric chain hoists are guaranteed only when the said equipment is operated in accordance with the prescribed grade.

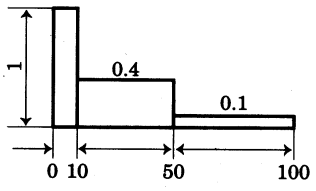
Electric chain hoists have been designed for grade 2m the FEM regulations (FEM 9.511).

Details are provided in Table 2-2.

Average daily operating time and total operating time are determined by load distribution.

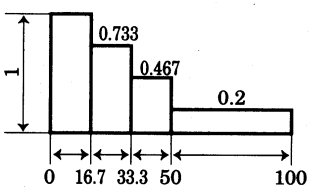
Table 2-2 Mechanical classifications

Load Spectrum (Load distribution)	Definitions	Cubic mean value	2m
			Average daily operating time (h)
			Total operating time (h)
1 (light)	Mechanisms or parts thereof, usually subject to very small loads and in exceptional cases only to maximum loads.	k ≦ 0.50	4-8
			12500
2 (medium)	Mechanisms or parts thereof, usually subject to small loads but rather often to maximum loads.	0.50 < k ≦ 0.63	2-4
			6300
3 (heavy)	Mechanisms or parts thereof, usually subject to medium loads but frequently to maximum loads.	0.63 < k ≦ 0.80	1-2
			3200
4 (very heavy)	Mechanisms or parts thereof, usually subject to maximum or almost maximum loads.	0.80 < k ≦ 1.00	0.5-1
			1600



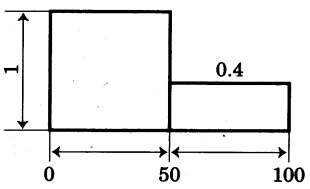
% operating time

Load spectrum 1



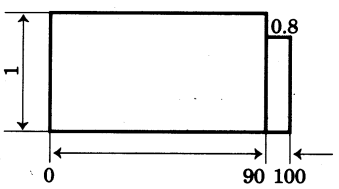
% operating time

Load spectrum 2



% operating time

Load spectrum 3



% operating time

Load spectrum 4

2.3 Safety Devices

(1) Motor brake

"Electro-Magnetic Brake" is of a unique design in its field. It features simultaneous motor braking upon switching off power even under full load condition.

(2) Mechanical load brake

The mechanical load brake can hold a full capacity load independent of motor brake. This brake assures that load does not accelerate while being lowered.

(3) Hook and hook latch

The hook is drop-forged from high tensile steel and heat treated for strength and Toughness. The bottom hook is capable of 360☒swivel and fitted with safety latch to ensure safe lifting.

(4) Phase error relay

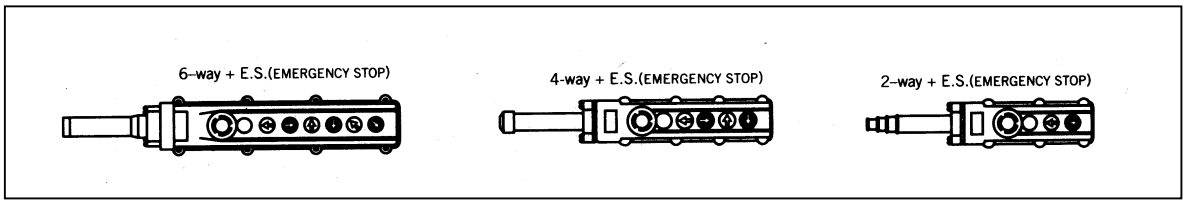
The Phase error relay circuit has been exclusively developed to prevent motor from running when the phase are incorrectly connected.

(5) Limit Switches (except YSE series)

Upper and lower limit switches are fitted for switching off power automatically in case of over lifting or over lowering.

(6) Emergency stop device

This button is used to stop the hoist in an emergency situation. It is a red, mushroom type button, located in the uppermost position on the pendant. When pressed, power to the equipment is switched off and the button locks automatically. Turning it to the right will release the lock and to enable re-starting. (Illust. 1)



Illust. 1

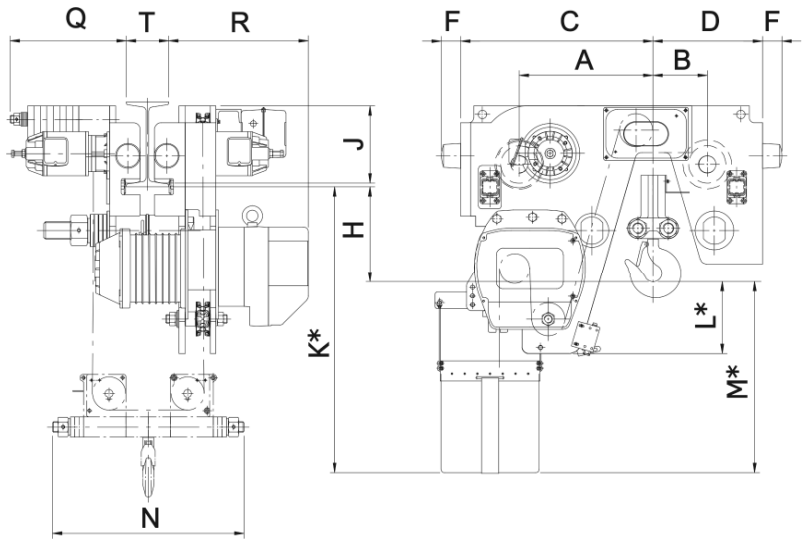
2.4 Main Specifications and Dimensions:

■ Main Specification

Model	Capacity (ton)	Fall No.	Hoisting			Traversing			Flange Width (mm) T	N.W (kg)
			Speed (m/min)		Motor kw pole	Speed (m/min)		Motor kw pole		
			50Hz	60Hz		50Hz	60Hz			
YLTU-100	1	2	3.3	4.0	1.5, 4P	20	24	0.25x2,4P	100~125	240
YLTUD-100			3.3/1.1	4.0/1.3	1.8/0.6 4/12P	20/6.7	24/8	0.25/0.08x2 4/12P		
YHTU-100	1	2	4.6	5.5	1.8,4P	20	24	0.25x2,4P	100~125	240
YHTUD-100			4.6/1.5	5.5/1.8	1.8/0.6 4/12P	20/6.7	24/8	0.25/0.08x2 4/12P		
YLTU-200	2	2	2.3	2.8	1.8,4P	20	24	0.25x2,4P	125~150	272
YLTUD-200			2.3/0.77	2.8/0.93	1.8/0.6 4/12P	20/6.7	24/8	0.25/0.08x2 4/12P		
YHTU-200	2	2	3.3	4.0	1.8,4P	20	24	0.25x2,4P	125~150	272
YHTUD-200			3.3/1.1	4.0/1.3	1.8/0.6 4/12P	20/6.7	24/8	0.25/0.08x2 4/12P		

■ Dimensions

Model	Capacity (ton)	Fall No.	Dimension(mm)											
			H	A	B	C	D	F	J	K*	L*	M*	N	Q	R
YLTU-100	1	2	240	302	128	431	256	21	147	746	240	506	435	343	349
YLTUD-100															
YHTU-100	1	2	240	302	128	431	256	21	147	746	240	506	435	343	349
YHTUD-100															
YLTU-200	2	2	255	302	128	431	256	21	167	738	217	483	435	343	349
YLTUD-200															
YHTU-200	2	2	255	302	128	431	256	21	167	738	217	483	435	343	349
YHTUD-200															



3. SAFETY RULES

⚠ DANGER

The hoist herein is not designed for, and should not be used for, lifting, supporting, or transporting personnel. Any modifications to upgrade, re-rate, or otherwise alter the hoist equipment must be authorized by either the original manufacturer or a qualified professional engineer.

(1) Only the trained personnel are allowed to operate the hoist.

(2)

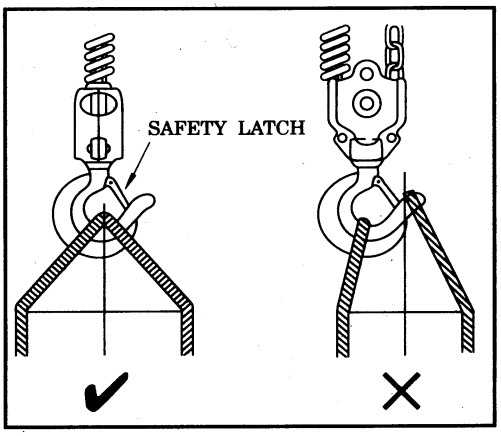
⚠ DANGER

Do not use the hoist in explosive atmosphere.

(3) Prior to each lifting operation, it is essential to make sure that:

(a) The correct lifting sling is being used.

(b) The lifting sling is located in the hook as shown below (Illust. 2) and that a safety latch has been fitted.



Illust. 2

(c) The object to be hoisted is well secured for direct lifting (a proper lifting frame or apparatus is strongly recommended for direct lifting .)

(4) Firm and steady button operation is required, never push the button switch intermittently.

(5) Always avoid excessive inching operation.

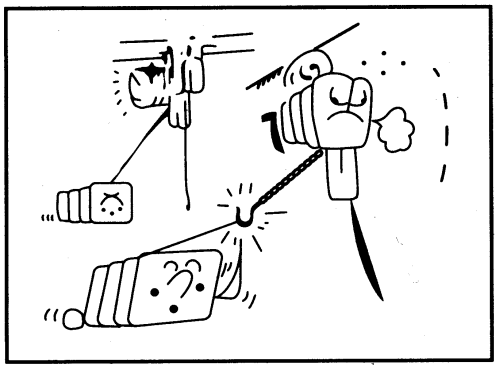
(6) Always make sure the hoist motor completely stops before reversing.

(7) Always leave the pendant button switch cable and bottom hook load chain vertically static after completion of operation, never leave them at any position, which may allow them swing or slip.

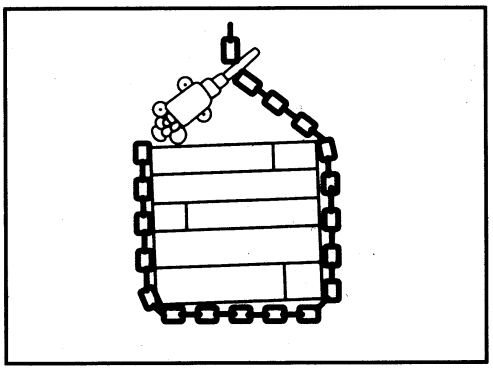
(8) Sling must be applied to load evenly and centrally to ensure correct balance. Never lift any object which is insecure or out of balance.

(9) Never use hoist to end or side pull a load. (Illust. 3)

(10) Never wrap around and hook back the load chain as a sling to lift a load. (Illust. 4)



Illust. 3



Illust. 4

(11)

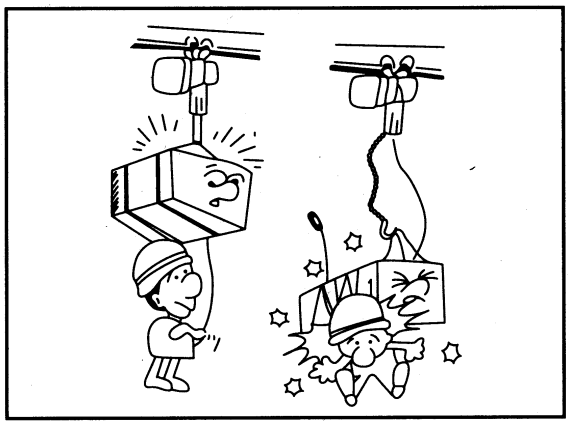
⚠WARNING

Do not use the hoist chain as a welding electrode.

(12)

⚠ DANGER

Never stand under a raised load (Illust. 5)



Illust. 5

(13) Lifting must always be personally attended, never leave a raised load unattended.

(14) Over-capacity-load lifting is hazardous and should not be undertaken.

(15) Never lift a load when the load chain is twisted.

(16) Regularly inspect and check the condition of load chain. Do not operate with damaged chain.

4. INSTALLATION

4.1 Unpacking Information

After removing the hoist from its packing box, carefully inspect the external condition of the electrical cables, contactor, gear box and motor casing for damage. Check and ensure that these items are present.

Each hoist is supplied as standard with the following accessories.

1. Chain bucket	1 set
2. Power cable	3 meters
3. Push button control switch	1 piece

Table. 4-1

4.2 Voltage

⚠CAUTION

If power supply deviates from standard by more than ± 10%, abnormal operation or damage to the motor may result. It is imperative to ensure correct voltage supply before commencing operation.

4.3 Installation

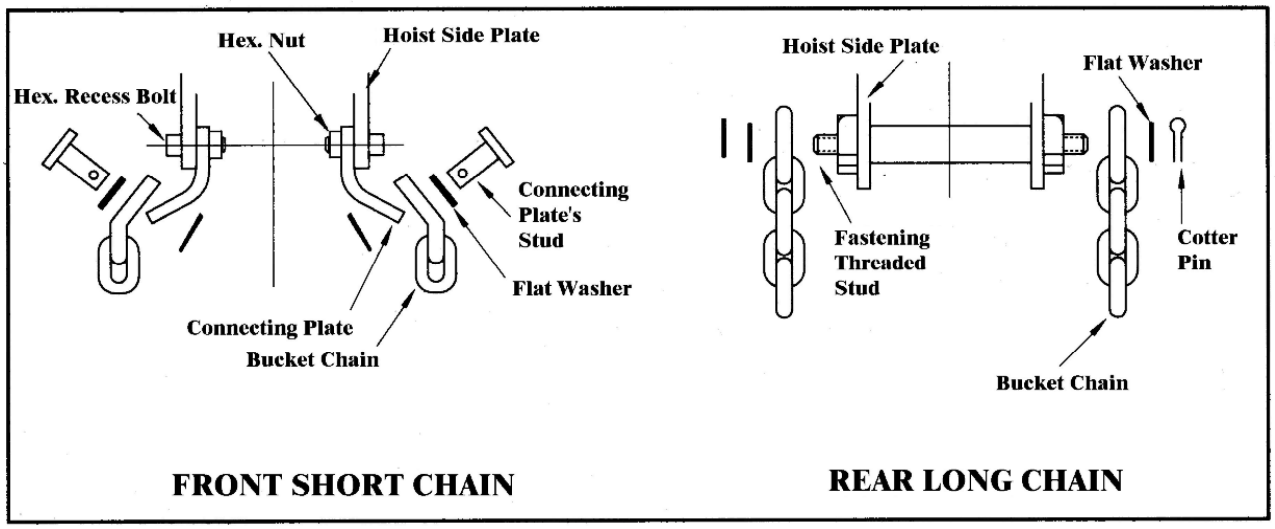
⚠WARNING

Connection to power supply before installation procedures having been completed is strictly prohibited.

(1) Prior to installation check and ensure that the top hook assembly is securely attached to the hoist by means of the lock bolt.

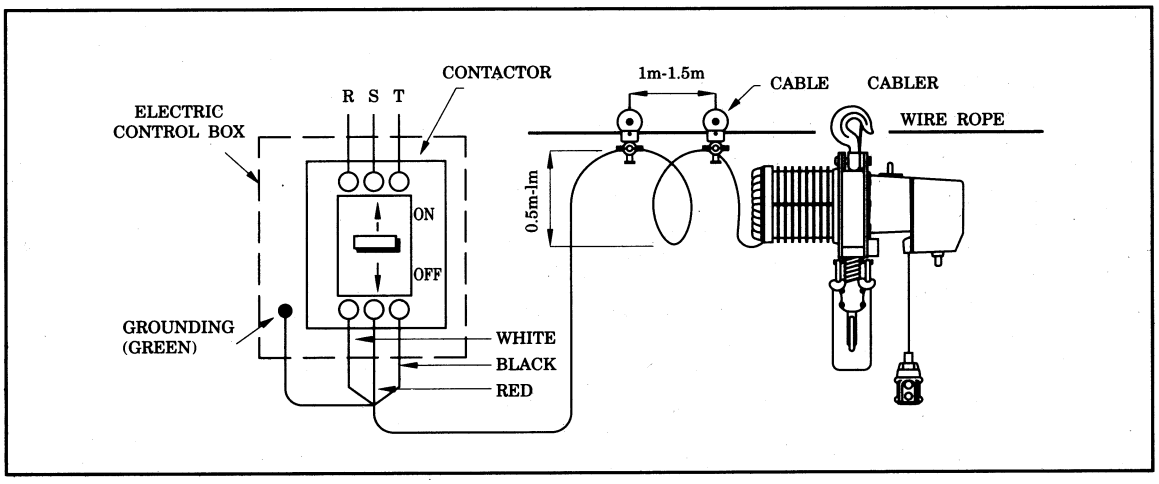
NOTE: If the hoist is to be suspended from an electric trolley, assembly may be eased by firstly removing the top hook, just attaching hoist top hook to the trolley load plate.

(2) Assemble chain bucket.



Illust. 6

(3) Connect power supply to hoist and operate the push button switch. This operation must be carried out by a trained person.



Illust. 7

(4) Operation Test

(a) Firmly push ⬇ switch button to lower load chain until the limit spring touches the limit switch. Power should be cut off automatically.

(b) Firmly push ⬆ switch button to check the collection of load chain into chain bucket.

(c) Check the emergency stop device function (if fitted):

While holding down either ⬆ or ⬇ button on the push button switch, push the emergency stop button. Check that the hook stops when the emergency stop button is pushed. Also, check the hoist does not move in response to the push button switch.

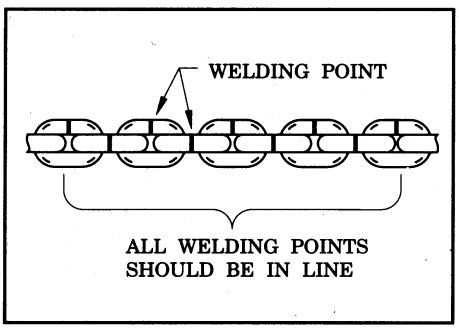
Finally, check that the emergency stop device pops out when turned to the right and that operation can be resumed thereafter. If the equipment fails to pass another above checks, check the wiring and automatic locking function of the emergency stop device.

(d) Check load chain lubrication (It has been lubricated at our works, but the lubricant may dry out during transportation). Any readily available lubricant is recommended. It is further advisable to keep a small amount of lubricant in chain bucket to allow chain in oil bath.

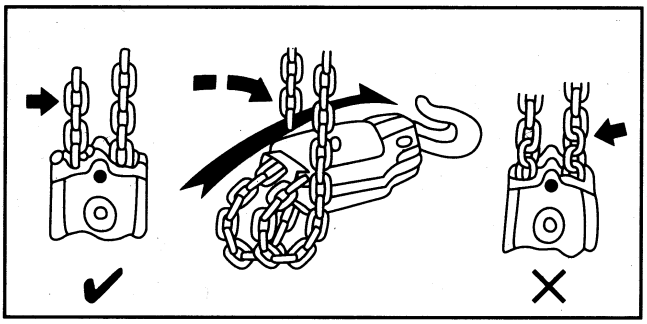
(e) Check chain position. Weld joints on links must face the same direction (Illust. 8), correct chain operation can only be achieved when all joints are vertically in line.

⚠CAUTION

The bottom hook on multi-fall hoist must never be rotated as Shown below. (Illust. 9)



Illust. 8



Illust. 9

5. OPERATION

After running test and checks have been completed, the hoist will be ready for normal operation.

⚠WARNING

Since dealing with heavy loads may involve unexpected danger all of the "SAFETY RULES" (Ref 3.) must be followed and the operator must be aware of the following points while using the hoist.

(1) on connection of power supply allow 15 seconds to initiate start up.
(2) The operator must have a clear and unobstructed view of the entire working area before operating the hoist.
(3) The operator must check that the entire working area is safe and secure before operating the hoist.
(4) When using the hoist with a plain trolley, the operator must take care to prevent excessive load swinging by sympathetic push trolley movements.

6. MAINTENANCE AND INSPECTION

⚠ DANGER

Do not perform maintenance on the hoist while it is carrying a load except monthly checking for the brake, limit switch or slip clutch.

⚠ DANGER

Before performing maintenance do not forget to affix tags to the power source and the push button switch reading : "DANGER", "EQUIPMENT BEING REPAIRED".

6.1 Maintenance

(1) Check the level of gear box lubricant after first 100 hours of operation, thereafter every 3 months and lubricant accordingly. Lubricant use ISO VG460 or equivalent.
(2) Always keep the hoist unit dry and never misuse it in a manner likely to reduce its durability.
(3) When it is necessary to keep the unit outdoors, a protective covering should be fitted.

6.2 Inspection

(1) Daily inspection: Before starting daily operation, check the following,

(a) Correct power supply.

(b) "Up" , "Down" and "Emergency stop" (where fitted) test runs under no load.

(c) Correct motor performance.

(d) No abnormal or excessive noise.

(e) No malfunction of the bottom hook safety latch.

(f) Proper function of moving/turning parts, limit switches and brake.

(g) Well lubricated load chain.

(2) Monthly inspection

⚠WARNING

Always use the hoist manufacture's recommended parts when repairing a hoist.

(a) Load chain:

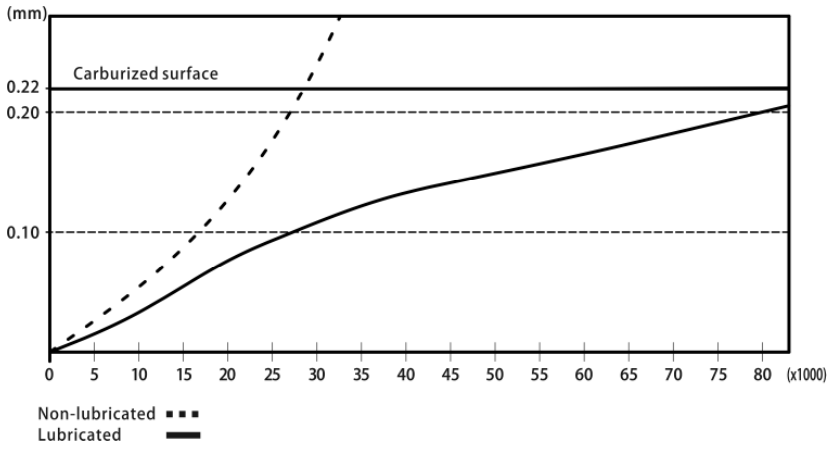
Distorted, elongated or worn chain link will not sit properly on the load sprocket wheel and may cause chain breakage and/or damage to hoist unit. To ensure safe and efficient operation, the chain links must be checked for their pitch (inside length), inside width and outside width monthly according to following table 6-2-a at page 18.

Chain Wearing Test

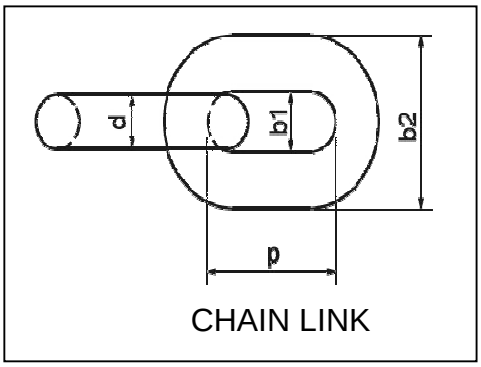
Load Spectrum	Cubic mean Value	Using times	
		Non-lubricated	Lubricated
1 (Light)	50%	232000	688000
2 (Medium)	63%	116000	344000
3 (Heavy)	80%	58000	172000
4 (Very heavy)	100%	29000	86000

Above testing data under lifting height 1M

1M pinpoint wearing test(100%Capactity)



Number of cycles (Lifting + lowering)



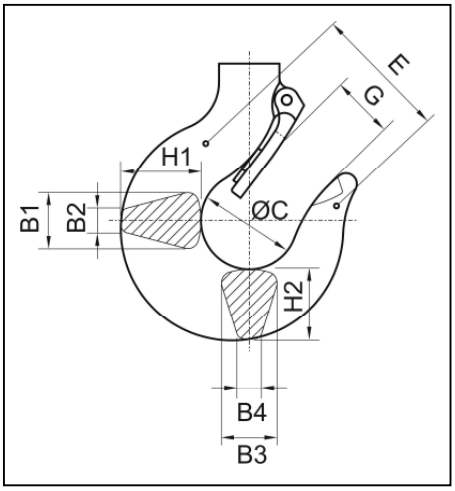
CHAIN LINK

Load (ton)	Dia.-Meter (mm) (d)	Inside Length (mm) (p)	Inside Width (mm) (b1)	Outside Width (mm) (b2)	Breaking Load (kn)
1~2	7.1	20.2	8.2	23.2	63

Table 6-2-a

(b) Load hook:

Check hook with care. If hook shows crack deformation or wear in excess of 5% of its original size, it should be replaced. (Ref. following table)



Capacity	Dimensions(mm)									Allow Stress (kg/mm^2)
	H1	B1	B2	H2	B3	B4	C	G	E	
1T	33	23	9	28	23	9	40	28	60	70
2T	45	31	10	41	31	10	46	36	75	70

(c)Limit Switches:

⚠WARNING

A qualified electrician should perform this inspection.

Check correct operation of the limit switches. Clean thoroughly and apply a thin lubrication to ensure correct operation.

(3) Annual inspection

⚠WARNING

Your dealer should be asked to perform this inspection.

(a) Check gearing for any excessive wear or damage.
(b) Replace gearbox lubricant completely (700 C.C~800C.C ±10%), as following table for your reference Table 6-2-c.
(c) Check brake lining and ratchet pawl for any wear or damage.
(d) Check operation of pawl spring.
(e) After reassembly of above check, lifting a load several times to ensure good performance of the hoist before starting duty operation.

※Oil Quality Table

For Load Chain / All Model						
Model	Lubricate Method	Lubricant Adding		Lubricant Changing		Recommended oils
		Period	Q'ty / c.c.	Period	Q'ty / c.c.	
All Model	Smear oil on load chain surface	Weekly	-	-	-	ISO VG460
All Gear Box	Soak in oil	Monthly	Suitable	Annual	1400 ~ 1500	ISO VG460

※Table of recommended oils

ISO-VGDIN 51519 viscosity At 40°C mm^2/s (cST)	Approximate viscosity of the VG Categories 50°C mm^2/s (cST)	ARAL	BP	ESSO	MOBIL OIL
VG460	251	Aral Degol BG 460-BMB 460	BP Energol GR-XP 460	Spartan EP-460	Mobilgear 634

ISO-VGDIN 51519 viscosity At 40°C mm^2/s (cST)	Approximate viscosity of the VG Categories 50°C mm^2/s (cST)	SHELL	TEXACO	I.P.	AGIP	TOTAL
VG460	251	Omala oil 460	Meropa 460	Mellana 460	Blasia 460	Carter EP 460

Table 6-2-c

Chain Gauge — Wear and Stretch Measuring

(1) The chain gauge is useful and convenience for measuring.

(2) Please use a chain gauge to measure the chain pitch and diameter, such as illustrations (1) and (2).

(3) Every chain ring must be measured, and the chain must be replaced when one of chain ring is wear or stretch.

(4) It will be a cutting-out possibility if you use a chain fall either wear or stretch during operation.

(5) Do not replace a chain fall by yourself and do please contact specific either service centers or contractors to help you out.

(6) The chain fall must be replaced whole instead of a partial part.

(7) The load sheave, regulator, and chain compressing wheel must be replaced the same time as you do a second time replacement.

Remark :

(1) Chain must be perfect condition without any defects and attachments.

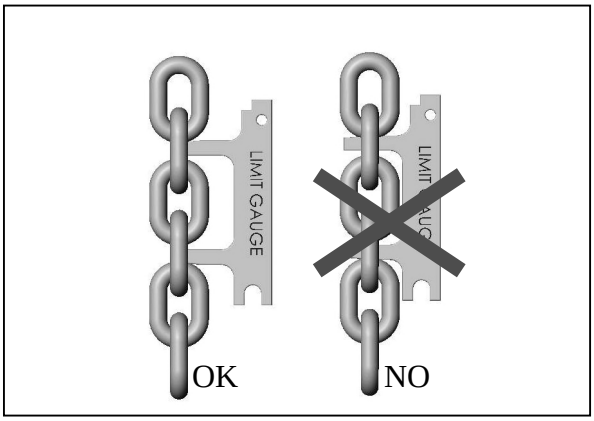


Illustration (1)
Chain pitch measure

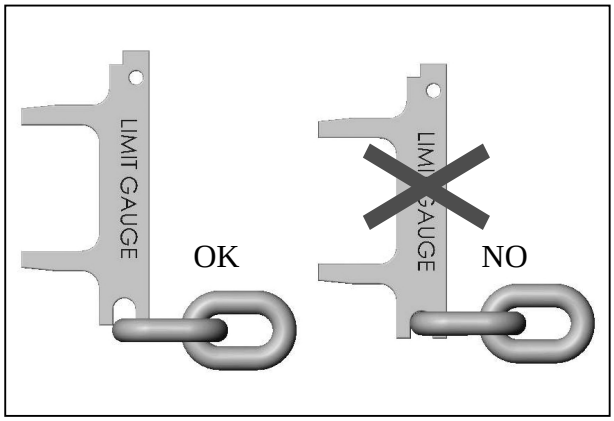


Illustration (2)
Diameter measure

7. TROUBLESHOOTING

7.1 Wiring Diagrams

The above listed wiring diagram for reference only.

The end user should refer to the wiring diagram stuck to the inside cover of the electric housing.

Our electric specifications can be done according to followings:

(a) 3-Phase or 1-phase

(b) 50Hz or 60 Hz

(c) Single and dual voltage

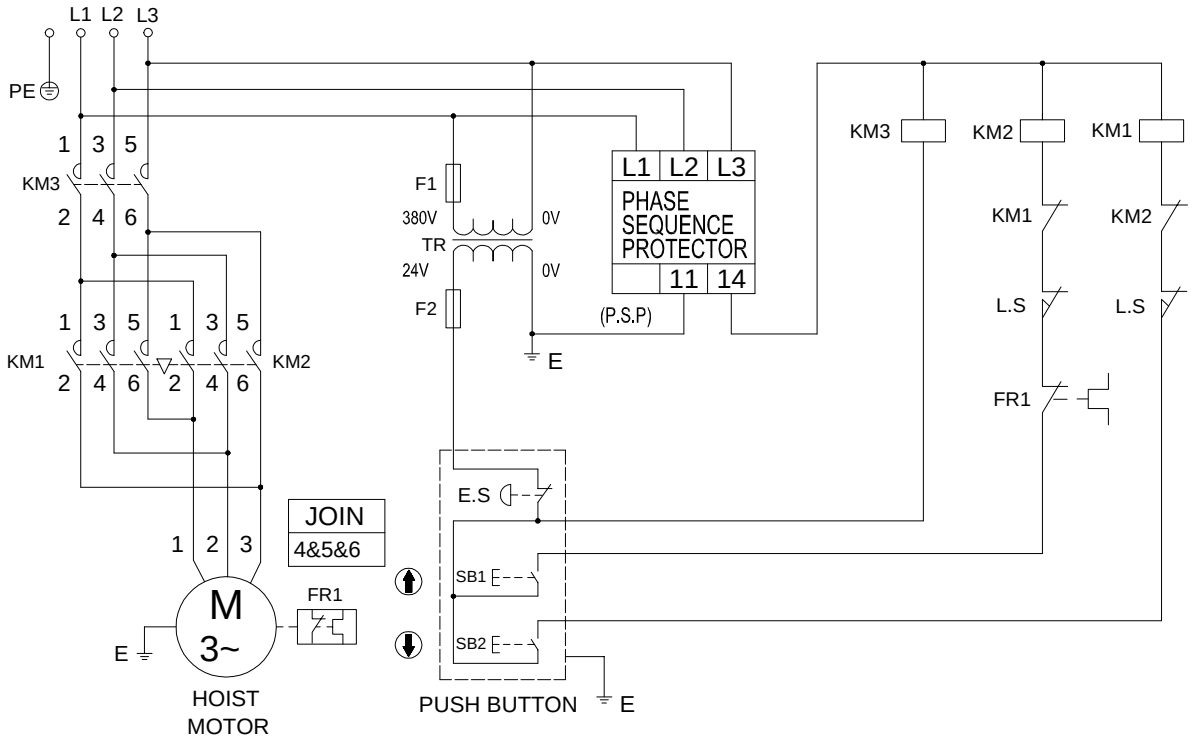
Voltage / Hertz	Dual Voltage	Single Voltage
50 Hz	220V/380V 220V/440V 230V/460V	220 to 600
60 Hz		

Table 7-1

Warranty Details:

1. Warranty Period : One year for Mechanical Spare Parts after purchase the product.
2. Non-Warranty Scope:
   a. Electrical Spare Parts (ex. Contactor, Pendant, Phase Error Relay, etc.)
   b. Expense Spare Parts (ex. Chain Bucket, Brake Lining, etc.)
   c. Damage caused by unsuitable operation. (galvanize plant, chemical plant, and dye-works etc.)
   d. Damage caused by operating on the wrong electric voltage.
   e. Damage caused by user emending the product.
   f. Damage caused by natural disaster.
3. Warranty Scope shall be permitted by Cheng Day Machinery and Within One Year of damaged Mechanical Spare Parts Repair and Replacement.
   (circumstance stated in detail No. 2 are not included.)

CHAIN HOIST FOR SINGLE SPEED 380V- 24V



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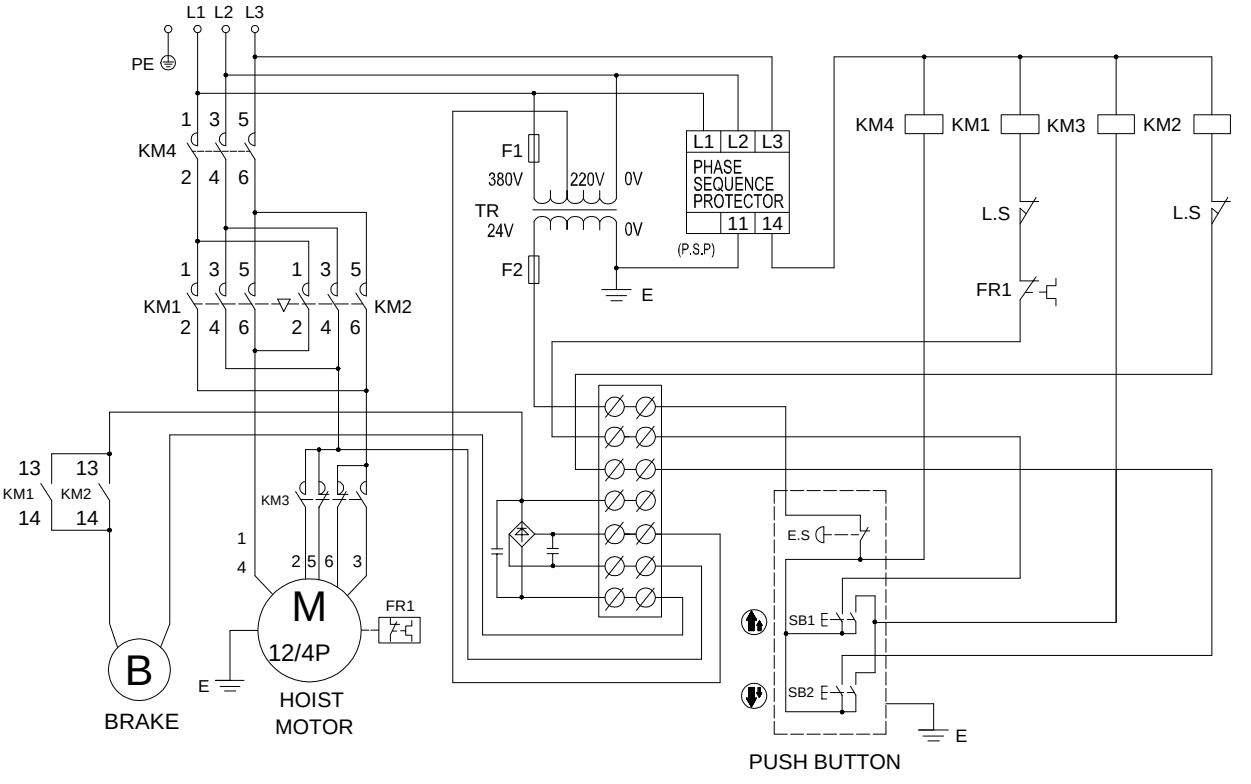
CHAIN HOIST FOR DUAL SPEED 380V- 24V



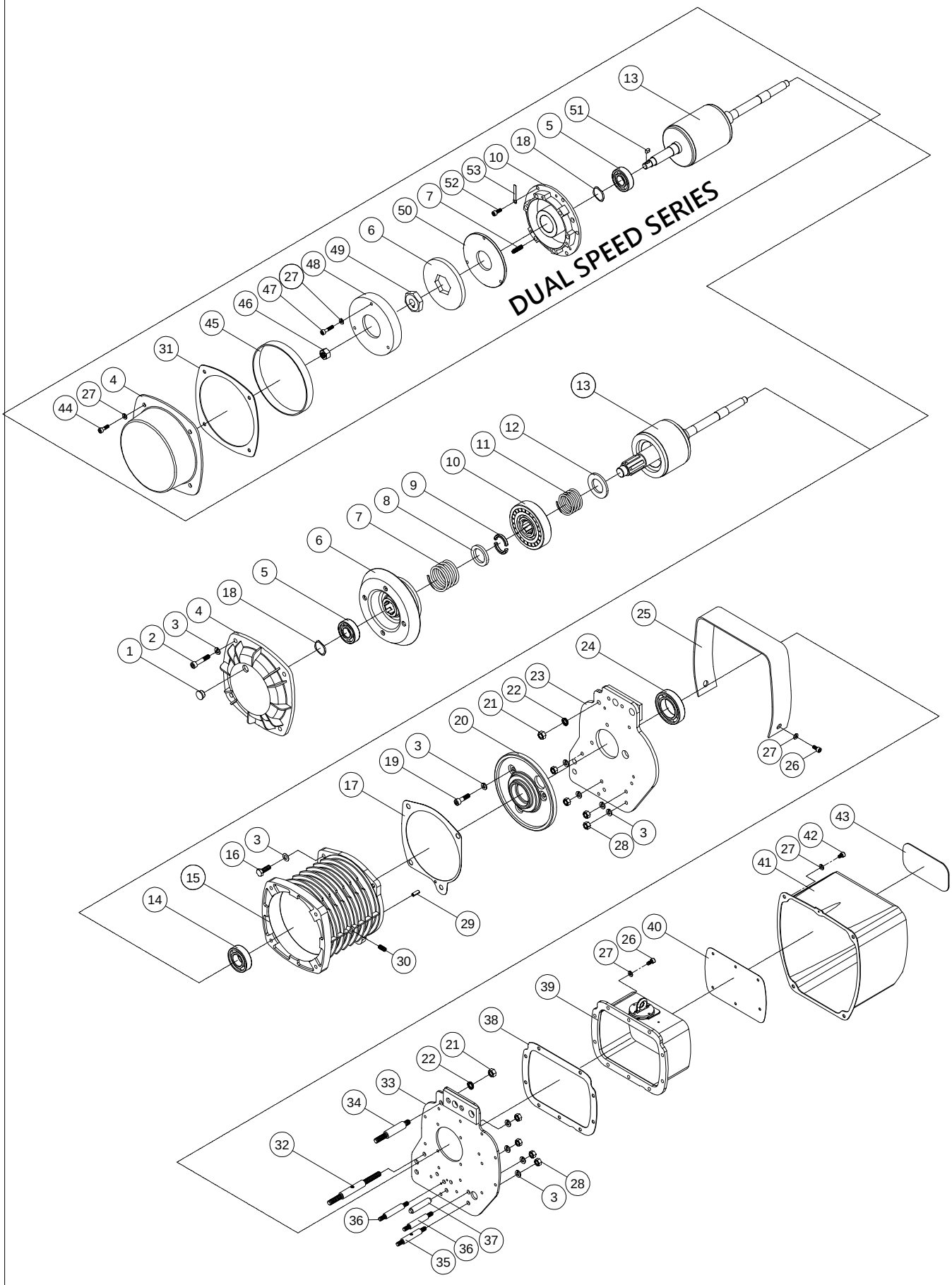
A20015-2RM

7.2 Troubleshooting and Remedial Action

SITUATION	CAUSE	REMEDY
Hoist will not operate	(1) Phase error relay operated due to incorrect phase connections.	Reverse any two phase connections
	(2) Blown power fuse or tripped power circuit breaker.	Check supply requirements and refuse/reset breaker to meet requirements
	(3) Blown control circuit fuse.	Check fuse for correct rating and replace
	(4) Broken/disconnected power or control circuit wire.	Locate and repair/reconnect
	(5) Low supply voltage	Check if 10% reduction in voltage, have mains supply checked
	(6) Motor hums but does not rotate	Check phases to motor-insulate and repair
	(7) Emergency stop button release pushed (if fitted)	Check the cause as necessary
	(8) Faulty contactor	Operate manually if hoist runs then control circuit/coil is faulty-locate fault and repair. If hoist does not run then check main supply. If input supply is correct but there is a faulty output supply then replace the contactor
Hoist will not stop	Welded contacts in contactor	Replace contactor
Brake slips	Abrasion of motor brake	Replace
Hoist runs but can't lift rated load (YSE-Series)	Clutch Slipping	Tighten adjusting nut and reverse $1\frac{1}{8}$ circle
Abnormal sound on load chain/chain sprocket	(1) Chain dry (2) Worn chain sprocket	Lubricate Replace load chain and chain sprocket
Electric shock	(1) Poor earth connection (2) Accumulated foreign matter/moisture on electrical parts	Provide correct earth connection Remove foreign matter/dry electrical parts
Oil leak	(1) No oil plug (2) Loose fitting of oil plug (3) No plug packing (4) Worn or deteriorated oil packing	Attach the normal oil plug Fasten the plug tightly Attach normal packing Attach the new packing

8.Drawings and Parts List

MOTOR ASSEMBLY & HOUSING



Motor Assembly & Housing B.O.M

D : Dual Speed

Key No.	Parts Code	Description	Q'ty Req'd			
			YLTU(D)		YHTU(D)	
			1	2	1	2
1	400263	Dust Stopper	1		1	
2	400014	Hex. Recess Bolt<M8×30L>	4		4	
3	400095	Spring Washer<M8>	17,13D		17,13D	
4	100431	Motor End Cover	1		1	
	100440		1D		1D	
5	405577	Bearing<6204 2RS>	1,1D		1,1D	
6	100432	Brake Drum	1		1	
	100408	Brake Shoe Lining	1D		1D	
7	400236	Brake Spring	1		1	
	408554		6D		6D	
8	100364	End Spacer	1		1	
9	100362	Load Brake Gear Spacer	2		2	
10	100413	Electro-Magnetic Brake Controller	1		1	
	100500	Magnetic Coil Ass'y	1D		1D	
11	400235	Spindle Spring	1		1	
12	100428	Spring Pad	1		1	
13	100320	Motor Rotor	1			
	100321			1	1	
	100323		1		1D	
14	400129	Bearing<6005 ZZ>	1,1D		1,1D	
15	A	Motor Stator Ass'y	1			
	B			1	1	
	C		1D		1D	
16	400013	Hex. Recess Bolt<M8×25L>	2		2	
17	402505	Gasket 5#	1,1D		1,1D	
18	400577	Corrugated Washer<6204>	1		1	
19	400012	Hex. Recess Bolt<M8×20L>	3,3D		3,3D	
20	100460	Flange	1,1D		1,1D	
21	400082	Hex. Nut<M10×1.5>	2,2D		2,2D	
22	400096	Spring Washer<M10>	2,2D		2,2D	
23	207284	Motor Front Plate Ass'y	1,1D		1,1D	
24	400134	Bearing<6008 ZZ>	1,1D		1,1D	
25	400265	Rubber Cover	1,1D		1,1D	
26	408635	Hex. Recess Bolt <M6×1.0×14L>	12,12D		12,12D	

#15Ref. Page25

Motor Assembly & Housing B.O.M

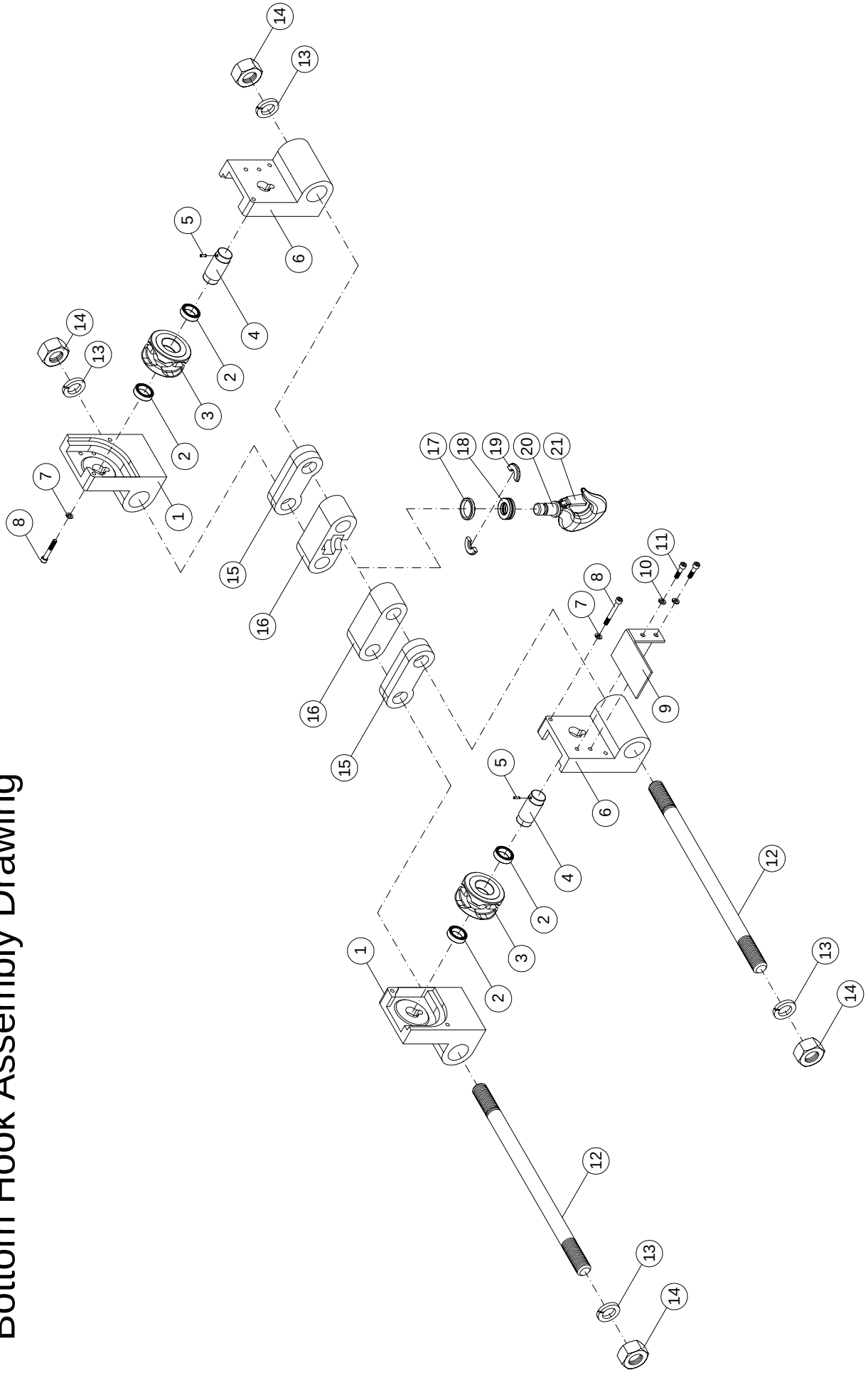
D : Dual Speed

Key No.	Parts Code	Description	Q'ty Req'd			
			YLTU(D)		YHTU(D)	
			1	2	1	2
27	400094	Spring Washer<M6>	20,29D		20,29D	
28	400081	Hex. Nut<M8×1.25>	8,8D		8,8D	
29	400213	Spring Pin<Ø6×16L>	1,1D		1,1D	
30	400585	Threaded Stud<M8×16L>	1,1D		1,1D	
31	402578	Gasket 51#	1D		1D	
32	200235	Lock Stud C	1,1D		1,1D	
33	207279	Gearbox Endplate	1,1D		1,1D	
34	200233	Lock Stud A	1,1D		1,1D	
35	200236	Lock Stud D	1,1D		1,1D	
36	200237	Lock Stud E	2,2D		2,2D	
37	200240	Lock Pin	1,1D		1,1D	
38	402523	Gasket 23#	1,1D		1,1D	
39	200045A	Gearbox Casing	1,1D			
	200046A				1,1D	
40	402524	Gasket 24#	1,1D		1,1D	
41	300763A	Electric Comp Oneness Casing	1,1D		1,1D	
42	400421	Hex. Recess Bolt<M6×1.0×10>	4,4D		4,4D	
43		Name Plate	1,1D		1,1D	
44	400007	Hex. Recess Bolt<M6×20L>	4D		4D	
45	400266	Protection Rubber Band	1D		1D	
46	400091	Lock Nut<M12×1.75>	1D		1D	
47	400009	Hex. Bolt<M6×35L>	3D		3D	
48	107495	Brake Drum Cover	1D		1D	
49	100303	Brake Bushing	1D		1D	
50	100405	Fixed Brake Plate	1D		1D	
51	400963	Key<6×6×15L>	1D		1D	
52	400006	Hex. Recess Bolt<M6×16L>	6D		6D	
53	300801	Cable Fixing Plate	2D		2D	

Motor Assembly & Housing B.O.M

KEY NO.	PARTS CODE		DESCRIPTION	Ø - Hz- V	
15	A	132551	Motor Stator Ass'y<1.5kW × 4P>	3Ø 60Hz	220 / 380V
		132552			220 / 440V
		132553			230 / 460V
		132557			480V
		132555			600V
		132561		3Ø 50Hz	220 / 380V
		132562			400V
		132563			415V
	B	132581	Motor Stator Ass'y<1.8kW × 4P>	3Ø 60Hz	220 / 380V
		132583			220 / 440V
		132584			230 / 460V
		132586			600V
		132591		3Ø 50Hz	220 / 380V
		132593			400V
		132592			415V
	C	132623	Motor Stator Ass'y<1.8kW × 4P>	1Ø 60Hz	115V
		132621			220V
		132622			230V
		132626		1Ø 50Hz	110V
		132627			220V
		132628			230V
	D	132651	Motor Stator Ass'y<1.8kW × 4/12P>	3Ø 60Hz	220V
		132661			230V
		132652			380V
		132655			440V
		132653			460V
		132654			600V
		132656		3Ø 50Hz	220V
		132657			380V
		132658			415V

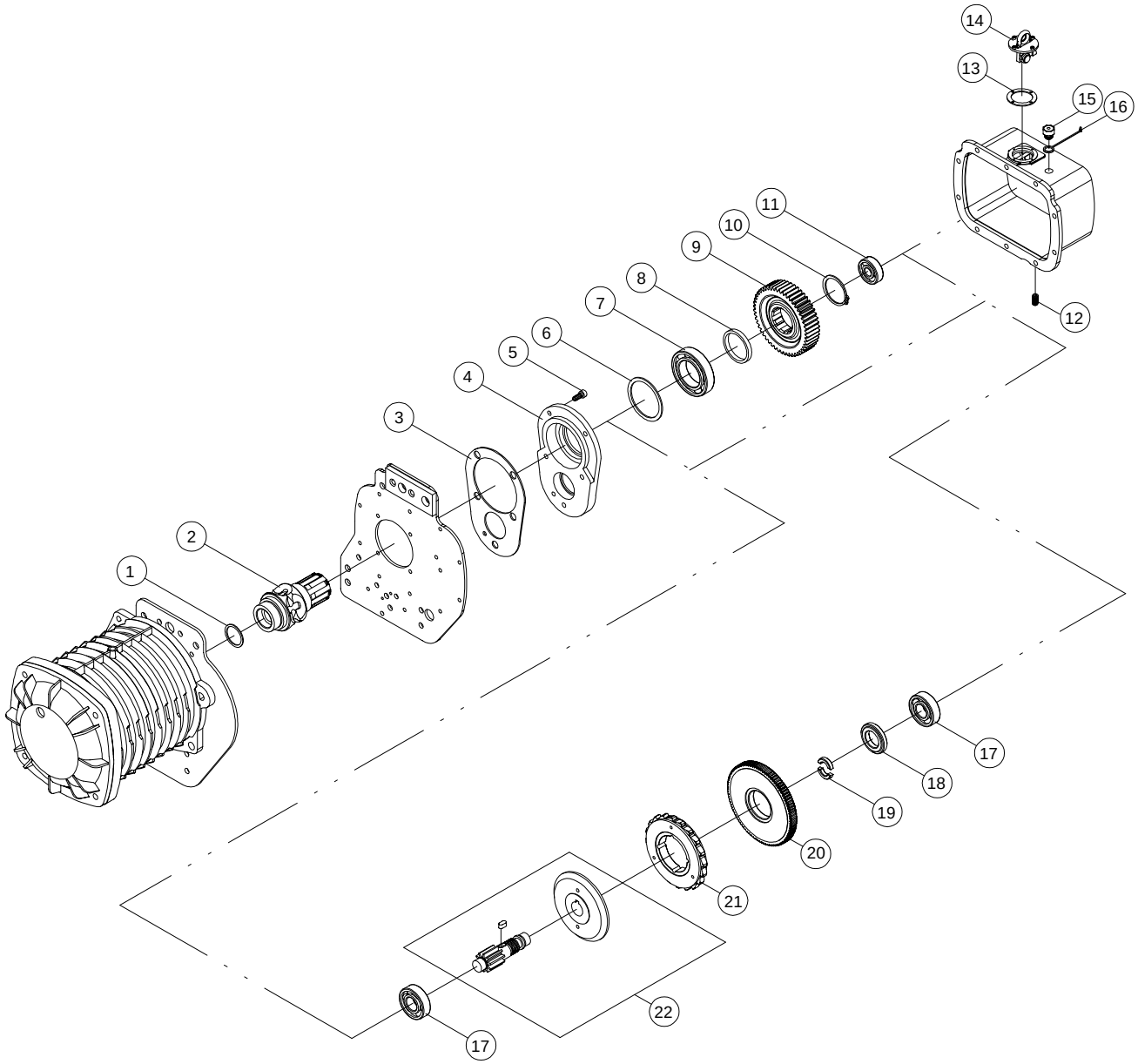
Bottom Hook Assembly Drawing



Bottom Hook Assembly B.O.M

Key No.	Parts Code	Description	Q'ty Req'd			
			YLTU(D)		YHTU(D)	
			1T	2T	1T	2T
1	207334	Bottom Hook Housing A	2	2	2	2
2	400171	Needle Bearing <HK 25/26>	2	2	2	2
3	200108	Sprocket	2	2	2	2
4	200114	Sprocket Axle <Ø25×58>	2	2	2	2
5	400212	Spring Pin <Ø5×16>	2	2	2	2
6	207335	Bottom Hook Housing B	2	2	2	2
7	400094	Spring Washer <M6>	4	4	4	4
8	400009	Hex. Recess Bolt <M 6×1.0×35>	4	4	4	4
9	207005	Limit Plate	1		1	
	207340			1		1
10	400094	Spring Washer <M6>	2	2	2	2
11	400005	Hex. Recess Bolt <M 6×1.0×12>	2	2	2	2
12	207362	Lock Stud < 7/8"×9UNC-385>	2		2	
	408371	Lock Stud <1 1/4"×7UNC×435>		2		2
13	400102	Spring Washer <7/8">	4		4	
	400105	Spring Washer <1 1/4">		4		4
14	202016	Nut <7/8"×9UNC>	4		4	
	202011	Nut <1 1/4"×7UNC>		4		4
15	207360	Washer <t13×43.5×119.5>	4		4	
	207338	Washer <t13×53×147>		4		4
16	207356	Bottom Hook Cover Set C	2		2	
	207336			2		2
17	200131	End Spacer	1		1	
	200132			1		1
18	400157	Thrust Bearing <2904>	1		1	
	400158	Thrust Bearing <2905>		1		1
19	200127	Load Brake Gear Spacer	2		2	
	200128			2		2
20	209352	Bottom Hook	1		1	
	209353			1		1
21	400487	Safety Latch Ass'y	1		1	
	400488			1		1

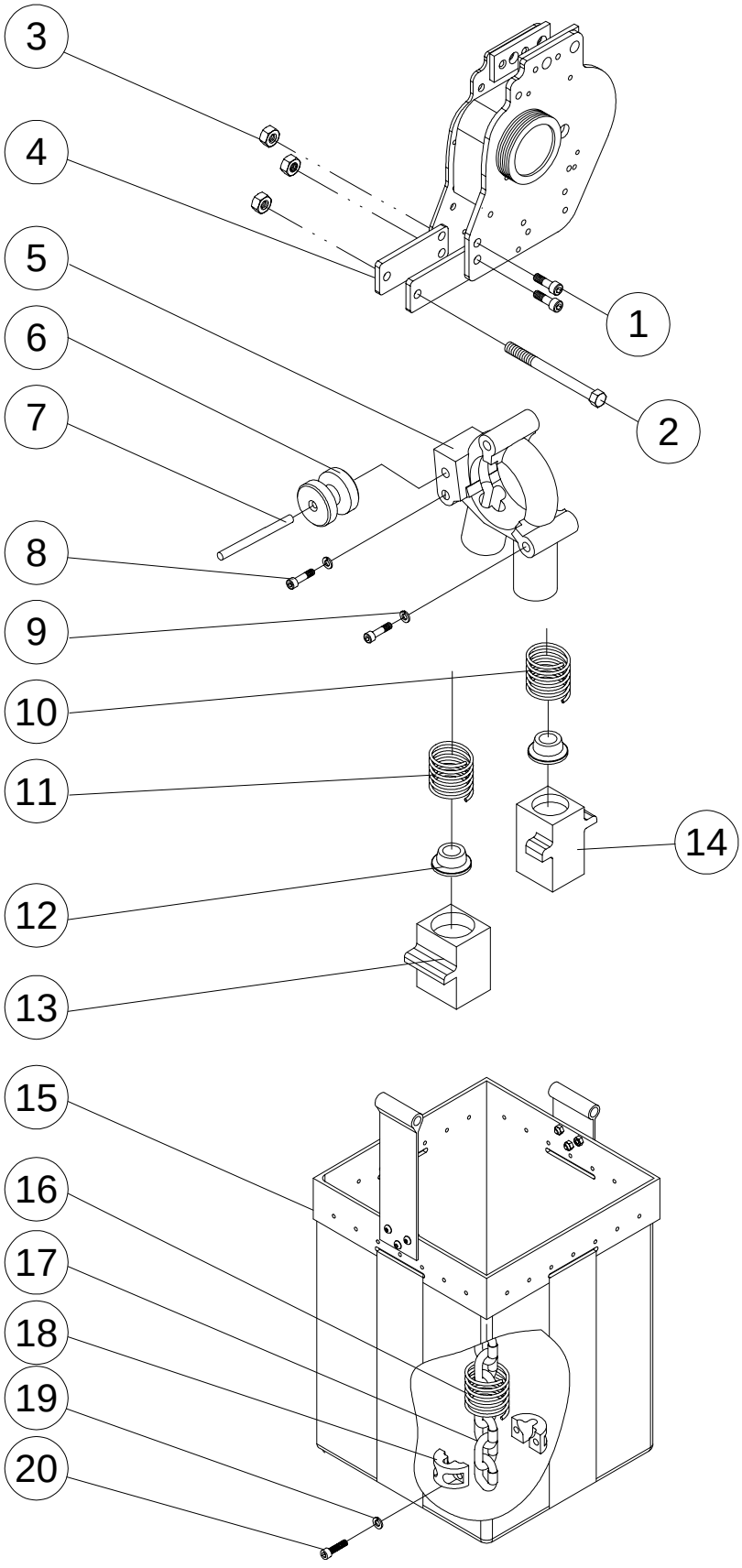
Reducing Gear Box Drawing



Reducing Gear Box B.O.M

Key No.	Parts Code	Description	Q'ty Req'd			
			YLTU(D)		YHTU(D)	
			1	2	1	2
1	404487	Oil Seal <Ø17×Ø28×6t>	1		1	
2	200196	Load Sheave	1	1		1
	200197				1	
3	402503	Gasket 3#	1		1	
4	200211	Flange	1	1		
	200210				1	1
5	408635	Hex. Recess Bolt <M6×1.0×14L>	5		5	
6	400184	Oil Seal <Ø42×Ø55×9t>	1		1	
7	400133	Bearing <6008>	1		1	
8	200628	Load Brake Gear Spacer	-		1	
9	200263	Load Brake Gear (4th Gear)			1	
	200264		1			
10	400195	Retaining Ring <S-40>	1		1	
11	400128	Bearing <6301>	1		1	
12	400207	Oil Plug <1/8" PT>	1		1	
13	402504	Gasket 4#	1		1	
14	208291	Ratchet Pawl Bracket Ass'y	1		1	
15	200926	Hexagon Oil Plug <M12×1.25×16.5L>	1		1	
16	200927	Air Plug	1		1	
17	407732	Bearing <6203>	2			
	407734	Bearing <6204>			2	
18	200275	End Spacer	1			
	200276				1	
19	200272	Load Brake Gear Spacer	2			
	200273				2	
20	200593	Intermediate Gear (2nd.Gear)	1			
	200592				1	
21	200581	Ratchet Wheel	1		1	
22	200620	Load Brake Gear Shaft Ass'y (3rd Gear)	1			
	200619				1	

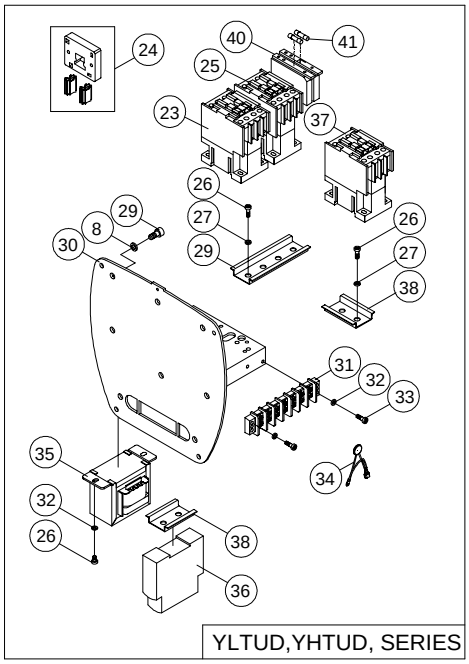
Load Chain Section Drawing

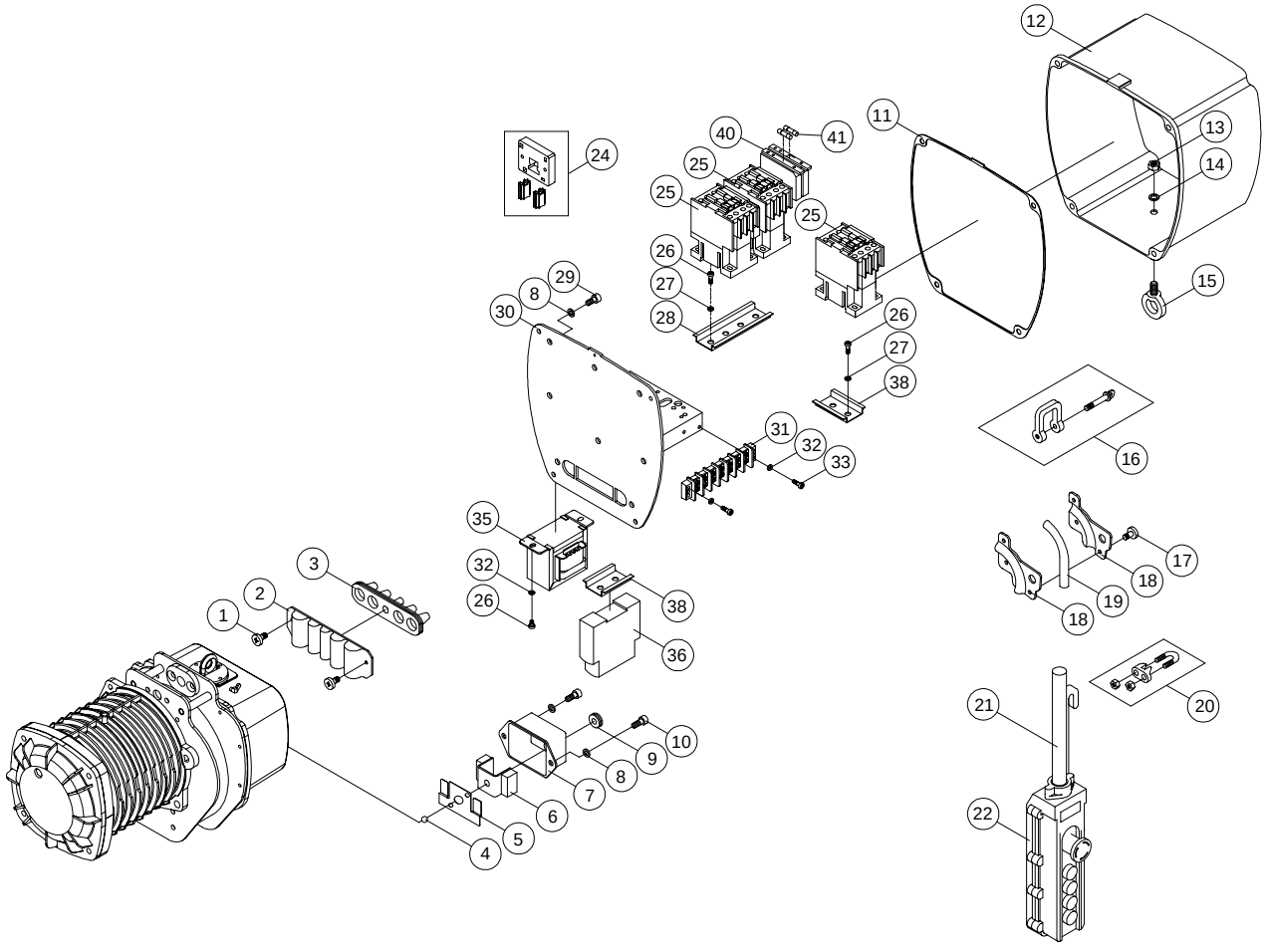


Load Chain Section B.O.M

Key No.	Parts Code	Description	Q'ty Req'd			
			YLTU(D)		YHTU(D)	
			1	2	1	2
1	404630	Hex. Bolt <M10×1.5×100L>	1			
2	400449	Hex. Recess Bolt <M10×1.5×25L>	4			
3	400089	Lock Nut <M10×1.5>	5			
4	207281	Connecting Plate	2			
5	200158	Regulator	1			
6	200159	Chain Compressing Wheel	1			
7	400281	Compressing Wheel Axle	1			
8	400012	Hex. Recess Bolt <M8×1.25×20L>	3			
9	400095	Spring Washer <M8>	3			
10	400228	Guide Spring A	1			
11	400229	Guide Spring B	1			
12	200183	Bushing	2			
13	200205	Guide Tube B	1			
14	200204	Guide Tube A	1			
15	207289	Chain Bucket Ass'y 17#	1			
16	400232	Limit Stopper	1			
17	400542	Load Chain <ø7.1>	8.2M			
18	200200	Chain Stopper	2			
19	400094	Spring Washer <M6>	2			
20	400007	Hex. Recess Bolt <M6×1.0×20>	2			

Electric Parts Drawing





Electric Parts Drawing

D：Dual Speed

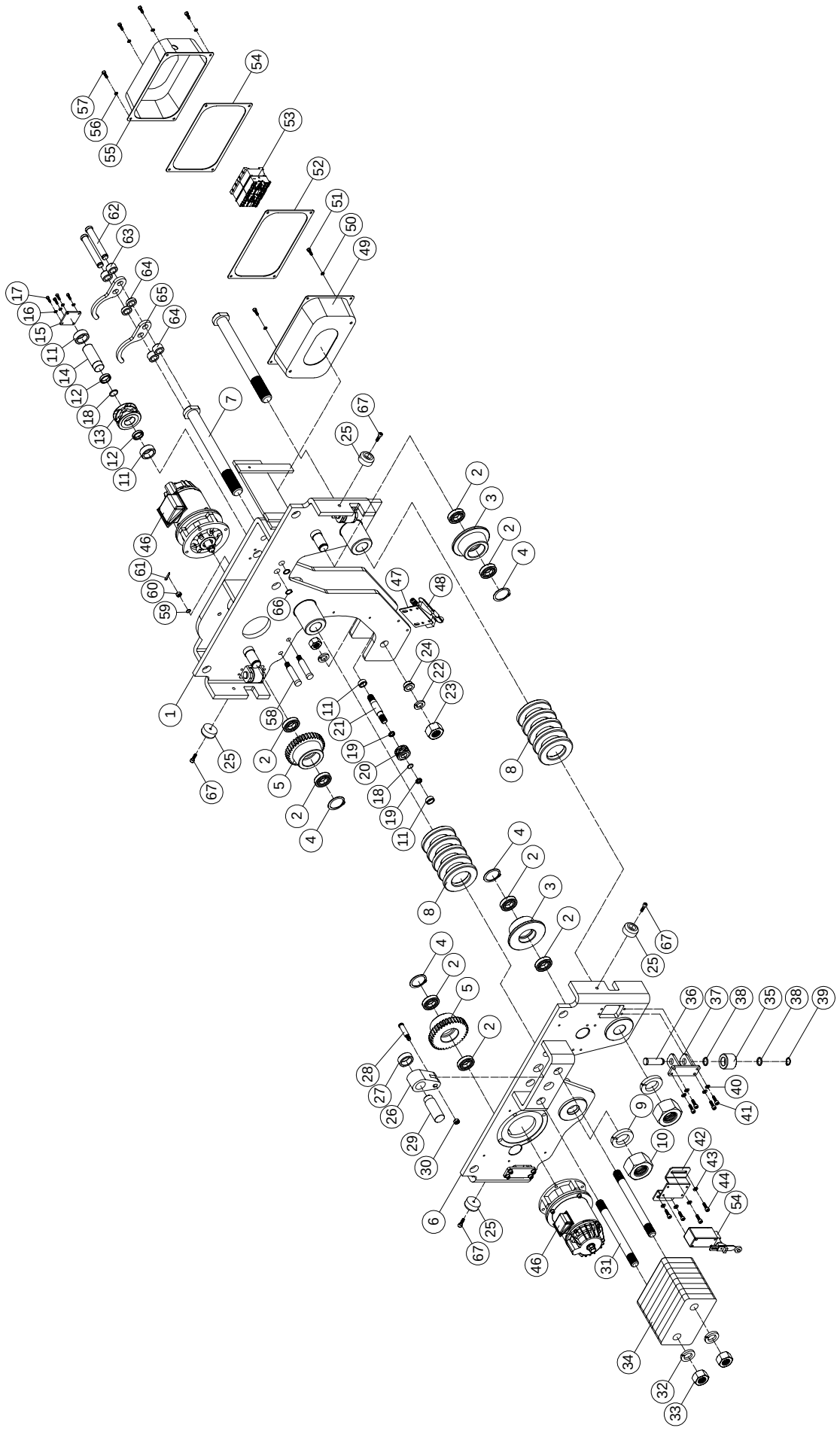
Key No.	Parts Code	Description	Q'ty Req'd			
			YLTU(D)		YHTU(D)	
			1	2	1	2
1	400053	Cross Headed Screw <M5×0.8×12L>	2,2D		2,2D	
2	300341	Wire Holder	1,1D		1,1D	
3	400268	Wire Holder Rubber Cap	1,1D		1,1D	
4	400276	Carbon Steel Ball	2,2D		2,2D	
5	200213	Leaf Spring	1		1	
6	302602	Limit Switch Ass'y	1,1D		1,1D	
7	300352	Limit Switch Cover	1,1D		1,1D	
8	400094	Spring Washer<M6>	8,8D		8,8D	
9	400269	Rubber Cap	1,1D		1,1D	
10	400004	Hex. Recess Bolt <M6x1.0x8L>	2,2D		2,2D	
11	402526	Gasket 26#	1,1D		1,1D	
12	300763A	Electric Comp Oneness Casing	1,1D		1,1D	
13	400081	Hex. Nut<M8×1.25>	1,1D		1,1D	
14	400095	Spring Washer<M8>	1,1D		1,1D	
15	400217	Eye Bolt	1,1D		1,1D	
16	400275	Shackle	1,1D		1,1D	
17	400055	Cross Headed Bolt <M6×1.0×12L>	3,3D		3,3D	
18	300344	Power Cable Holder(Left)	1,1D		1,1D	
	300345	Power Cable Holder(Right)	1,1D		1,1D	
19	301253	Power Cable	3M		3M	
20	400297	Wire Clip<3/16">	1,1D		1,1D	
21		Pendant Cable With Wire Rope "Built In"	1,1D		1,1D	
22	301742	Push Button Switch(Indirect)	1		1	
	312451	Push Button Switch (Dual speed)	1D		1D	
23	300064	Magnetic Contactor (LC1-K0901-B7)	1D		1D	
24	300800	Mechanical Interlock	1, 1D		1,1D	
25	301101	Magnetic Contactor (LC1-D09-B7)	3		3	
	300065	Magnetic Contactor(LC2-K09004-B7)	1D		1D	
26	400048	Cross Headed Bolt <M4×0.7×6L>	10,12D		10,12D	
27	400661	Flat Washer	4,4D		4,4D	

ELECTRIC PARTS

D：Dual Speed

Key No.	Parts Code	Description	Q'ty Req'd			
			YLTU(D)		YHTU(D)	
			1	2	1	2
28	300092	Contactor Rail	1,1D		1,1D	
29	400005	Hex. Recess Bolt <M6×1.0×12L>	6,6D		6,6D	
30	300358	Components Front Plate	1,1D		1,1D	
31	300228	Terminal Block	2,2D		2,2D	
32	400092	Spring Washer <M4>	6,8D		6,8D	
33	400051	Cross Headed Bolt <M4×0.7×12L>	4,6D		4,6D	
34	300143	Rectifier Ass'y	1D		1D	
35	301003	Transformer <PS-3L>	1,1D		1,1D	
36	302376	Negative Phase Protector (N.P.P)	1,1D		1,1D	
37	300066	Magnetic Contactor(LC1-K09008-B7)	1D		1D	
38	300078	Contactor Rail(1PC)	2,1D		2,1D	
39	300078	Contactor Rail(1PC)	1D		1D	
40	300995	Fuse Holder	2		2	
41	300993	Fuse	2		2	

Low Headroom Model's Drawing



Low Headroom Model's B.O.M

Key No.	Parts Code	Description	Q'ty Req'd	
			YLTU(D)/ YHTU(D)	
			1T	2T
1	207350	Drive Frame Ass'y	1	
	207325			1
2	407835	Bearing <6204 Z>	8	
	407830	Bearing <6205 Z>		8
3	203131	Idler Wheel	2	
	203132			2
4	400191	Retaining Ring <S-20>	4	
	400192	Retaining Ring <S-25>		4
5	203111	Drive Wheel	2	
	203112			2
6	207345	Drive Frame Ass'y A	1	
	207319			1
7	207344	Hex. Headed Bolt <1 1/4"-7UNC×305>	2	
	207317	Hex. Headed Bolt <1 1/4"-7UNC×330>		2
8	207318	Spacer Sleeve <Ø60×Ø33×12.5>	6	
9	400105	Spring Washer <1 1/4" >	2	
10	202011	Nut <1 1/4"-7UNC >	2	
11	207330	Spacer Sleeve <Ø42×Ø28×16>	4	
12	400170	Needle Bearing <NK 25/16>	2	
13	200109	Sprocket	1	
14	207341	Sprocket Axle <Ø25×95.5>	1	
15	207316	Shaft Stopper <t5×50×50>	1	
16	400094	Spring Washer <M6>	4	
17	400006	Hex. Recess Bolt <M6×1.0×16>	4	
18	200354	Sprocket Spacer <Ø32×Ø26×2.5>	2	
19	400170	Needle Bearing <NK 25/16>	2	
20	200109	Sprocket	1	
21	207331	Sprocket Axle <Ø25×173>	1	
22	400099	Spring Washer <M20>	2	
23	400640	Nut <M20×2.5>	2	
24	207332	Bushing <Ø42×18>	1	

Low Headroom Model's B.O.M

Key No.	Parts Code	Description	Q'ty Req'd	
			YLTU(D)/ YHTU(D)	
			1T	2T
25	404500	Bumper	4	
26	207307	Chain Connector	1	
27	207305	Spacer Sleeve <Ø42×Ø34.5×12>	1	
28	200176	Chain Connecting Pin <Ø16×57L>	1	
29	207306	Mounting Axle <Ø33×79L>	1	
30	400088	Lock Nut <M8×1.25>	1	
31	207299	Lock Stud <7/8"×9UNC×272>	2	
32	400102	Spring Washer <7/8">	4	
33	202016	Nut <7/8"×9UNC>	4	
34	207297	Counter Weight Block	12	
35	207315	Guide Wheel <Ø30×30>	4	
36	207313	Lock Pin <Ø18×55.5>	4	
37	207311	Bracket	4	
38	207314	Shaft Stopper <t2×Ø22×Ø17>	8	
39	400190	Retaining Ring <S- 16>	4	
40	400094	Spring Washer <M6>	16	
41	400007	Hex. Headed Bolt <M6×1.0×20>	16	
42	207006	Limit Steady	1	
	207283			1
43	400662	Flat Washer <M6>	4	
44	400006	Hex. Headed Bolt <M6×1.0×16>	4	
45	301478	Limit Switch <TZ -5108-2>	1	
46	101250	Motor Ass'y-B <M3.5×16T 0.25kW 50HZ 380V 4P>	2	
47	207556	Limit Steady	1	
48	300535	Limit Switch < ME-8108 >	1	
49	300394	Electric Housing Cover	1	
50	400094	Spring Washer <M6>	2	
51	400006	Hex. Headed Bolt <M6×1.0×16>	2	
52	402583	Gasket	1	
53	301101	Contactor <LC1-D09-B7>	2	
	300800	Mechanical Interlock	1	

Low Headroom Model's B.O.M

Key No.	Parts Code	Description	Q'ty Req'd	
			YLTU(D)/ YHTU(D)	
			1T	2T
54	402516	Gasket	1	
55	300395	Electric Housing	1	
56	400094	Spring Washer <M6>	6	
57	400006	Hex. Headed Bolt <M6×1.0×16>	6	
58	207288	Connecting Pin	2	
59	400097	Spring Washer <M12>	2	
60	400084	Nut <M12×1.75>	2	
61	400603	Cotter Pin <3/32″×1″L>	2	
62	207709	Axle <Ø20×110L>	2	
63	207706	Sleeve A <Ø17×Ø27×11>	2	
64	207707	Sleeve B <Ø17×Ø27×20>	4	
65	207708	Chain Guide Plate	2	
66	400190	Retaining Ring < S-16 >	2	
67	408333	Hex. Headed Bolt <M6×1.0×25>	4	

The Standard Instruction and Inspection for Chain Block

The additional remarks quote from the standard regulations.

I Instructions: Please pay attention to the followings while using

1・Ensure the conditions of the hoists and the ISO approval.

2・The capacity should be within the normal capacity.

3・Never use the load chain over standard. (above ISO 80)

4・Always use the hoist when the lift height is standard.

5・Keep daily inspection before using.

6・Inspect the load chain and chain ring are free. Never lift a load when the chain is twisted.

7・Never use the loose bottom hook.

8・Never use the load chain without "Up" and "Down" device.

9・Never use the chain to wrap the load.

10・Never lift a load with the front of the hook.

11・Never push the button switch

12・Never lift a load over the limit lift height.

13・Never stand under the raised load.

14・Never slant a load over 15°C.

15・Always avoid the hoist fall.

16・Replace the load chain every year when the hoist is used frequently.

17・Replace the load chain half a year and the bottom hook twice a year if the working environment temperature is above 100°C or below -40°C and the environment is corrosive and fracture.

Inspect the bottom hook and replace regularly when it's used frequently.

18・Inspect the load chain monthly by electroplate or heat treatment manufacturers and replace it yearly.

19・Never weld the load chain after broken.

20・The load chain should be lubricated before using.

21・Apply lubricant on the gear, bearing and other parts regularly.

22・Prevent the hoist from rusting after infrequent use.

23・Never modify the hoist by yourself. Please contact the original manufacturer to help you out.

24・Never lift the same object with two hoists. If necessary, make sure the lifting should be operated within normal capacity.

Daily inspection

Electric Chain Hoist Daily Inspection Checklist

Series No.:
Hoist Model:
Date of Purchasing: / / (D/M/Y)

Unit: Date: / /

No	Part	Item	Standard	V X Y N
1	Motor	Outlook	The temperate controls within E level insulating temperate(135℃)	
2	Hook	Hook Throat Distortion Motion	The hook opening widens. The hook distorts. The hook spins smoothly. The hook breaks or dents.	
3	Load Chain	Elongate Wear Distort Corrode Break Lubricate Rotate	The elongation is over. The chain diameter is overused. The distortion is visible The chain corrodes. The load chain cracks. Apply lubricant (except grease). The weld joints face the same direction.	
4	Brake		The brake slips or creaks.	
5	Push Bottom Switch	Operation Outlook	The motion is as standard. The cover is broken or deformed.	
6	Limit Switch	Operation	The motion is correct.	
7	Wiring	Wiring Outlook	The wiring is loose. The wiring is broken or hard.	

Monthly inspection

Electric Chain Hoist Monthly Inspection Checklist

Series No.:
Hoist Model:
Date of Purchasing: / / (D/M/Y)

Unit: Date: / /

No	Part	Item	Standard	V X	Y N
1	Limit Switch	Operate	Motion correct		
2	Hook	Hook Throat Distortion Motion Others	Opening Widens. Distorts. Spins Smoothly. Breaks or Dents.		
3	Load Chain	Elongate Wear Distort Corrode Break Lubricate	The elongation is over. The chain diameter is overused. The distortion is visible Corrodes. Cracks. Apply lubricant (except grease).		
4	Hex. Bolt		unwind		
5	Pendant Cable	outlook	Distortion		
6	Gear Box		Apply lubricant		

Yearly inspection

Electric Chain Hoist Yearly Inspection Checklist

Series No.:

Hoist Model:

Date of Purchasing: / / (D/M/Y)

Unit: Date: / /

No	Part	Item	Standard	V X	Y N
1	Bearing	Outlook	Leak or breaks		
2	Gear	Outlook	Leak or breaks		
3	Oil seal	Outlook	Harden or leak of oil		
4	Ratch	Wear Distortion	Wear away over limit The distortion is visible		
5	Load Sheave	Wear Distortion	Wear away over limit The distortion is visible		
6	Guide Tube	Wear Distortion	Wear away over limit The distortion is visible		
7	brake	Action Wear Distort Other	Voice Wear away over limit The distortion is visible Leak or defects		
8	Hex. Bolt	Everywhere	unwind		
9	Lubricate	change	Add new oil		
10	Load test	Normal rated weight	Replay hang products up and down		